2015

MIM2S Curriculum Modification for 2016-17

Fanshawe College

DEGREE AUDIT CHANGE FORM

COURSE OR PROGRAM CURRICULUM "RATIONALE FOR CHANGE"

Program Requiring Changes

Program Title: MECHANICAL ENGINEERING TECHNICIAN – INDUSTRIAL MAINTENANCE	
Program Number: MIM2S	Date Submitted: 11/13/2015
Dean responsible for program: Susan Cluett	Chair: Ross Fair
Credential Provided: ☐ Local Certificate ☐ Ont. College Certificate ☒ Diploma ☐ Adv. Diploma ☐ Degree	
Program Intakes: ☒ F ☐ W ☐ S Other:	Catalogue Year(s) Impacted: 16/17
Residency Requirement: ☒ Met or ☐ Not Met	Date of Last Program Review: Spring 2012

I have read the reasons for the change and...		*Signature and date*
Dean of Faculty (responsible for program):	☑ Approve ☐ Do Not Approve	Nov 25/15
Dean of Faculty (impacted by change):	☐ Approve ☐ Do Not Approve	
Dean of Faculty (impacted by change):	☐ Approve ☐ Do Not Approve	
Associate Vice President Academic (required for major changes and late DAs):	☑ Approve ☐ Do Not Approve	12/20/15
Director, Centre for Academic Excellence:	☑ Supports ☐ Does Not Support	Dec 15/15
Office of the Registrar:	☑ Supports ☐ Does Not Support	

Please answer each of the questions below, if applicable. Missing or incomplete information may delay review of the proposed changes.

1.0 Describe proposed change(s). Complete Appendix A (if necessary) and amend SDAR (Refer to Appendix C).

Through extensive consultations and feedback received from employers, graduates and other stakeholders, it has become clear that students would benefit from the study of business related topics including business organization, basic accounting principles, global economic impacts on small business as well as day to day operational concepts associated with running a small business. It so therefore proposed to amend the program course offerings to include a mandatory General Education course entitled "Introduction to Small Business Concepts" for all students enrolled in the program. Students would normally take the course during Level 2 of the program.

2.0 Reason/Rationale for Changes

2.1 The reason for the change is based on:

☐ A recent program review
☐ College Advisory Committee feedback
x☐ Program Advisory Committee feedback
☐ Student feedback
☐ KPI results
☐ Accreditation or other regulatory requirements
☐ Shared curriculum
x☐ Trends in the field/industry
☐ Other (please describe):

2.2 Does the change support the College's Strategic Framework (mission, vision, values)?

x☐ Yes
☐ No (If no, please explain)

2.3 What strategic goal(s) does the proposed change support?

x☐ Goal 1 - Enrolment growth
☐ Goal 2 - Flexible delivery options
x☐ Goal 3 - Premier student experience
x☐ Goal 4 - Sustainable College life

3.0 Students

3.1 Will the change affect the cost of the program for students?

☐ Yes
x☐ No

3.2 If yes, there will be an additional cost for:

☐ Materials (Include details):
☐ Equipment (Include details):
☐ Other (Please describe):

4.0 Program Learning Outcomes

4.1 Will the proposed change meet the Program Vocational Learning Outcomes? (Complete Appendix B)

x☐ Yes
☐ No

4.2 Are there any implications related to progression because of pre-requisite courses (and/or co-requisite courses)?

x☐ No
☐ Yes (If yes, please explain)

5.0 Relationships with Other Programs

5.1 Are any of the courses impacted by the change provided by another School (e.g., SLLS, LKSB) and/or delivered at another campus?

x☐ No
☐ Yes

5.2 What Schools/Campuses will be impacted by the proposed change?

☐ Tourism and Hospitality
☐ Information Technology
☐ Lawrence Kinlin School of Business
☐ Health Sciences
☐ Human Services
☐ Nursing
☐ Design
☐ Language and Liberal Studies
☐ Contemporary Media
☐ Building Technology
☐ Applied Sciences and Technology
☐ Transportation Technology
☐ Continuing Education
☐ Oxford County Campus
☐ James N. Allan Campus
x☐ St. Thomas Campus

5.3 Will the change affect pathway agreements (e.g., bridging, articulations, laddering, advanced standing) with other Fanshawe programs and/or other institutions? (Refer to the pathway agreements listed here: http://transferagreements.fanshawec.ca/)

x☐ No
☐ Yes (If yes, please explain)

5.4 What discussions have been initiated with these programs/institutions regarding the changes?

6.0 Resource Implications of Proposed Changes

6.1 Will the proposed change have staffing implications?

x☐ No
☐ Yes (If yes, please explain)

6.2 Will the proposed change impact any of the Enabling areas?

x☐ No
☐ Yes (If yes, please explain)

6.3 Will the proposed change affect space and/or technology requirements?

☐ No
x☐ Yes (If yes, please explain) Equipment purchases required to deliver the additional curriculum are underway. Facilities management as well Health and Safety is involved and apprised of all plans for equipment purchases/installation.

7.0 General College Requirements

7.1 Are changes consistent with Colleges policies/practices?

x☐ Yes
☐ No (If no, please explain)

7.2 Indicate:

i) Total program hours before proposed change: 1259
ii) Total program hours after proposed change: 1259
iii) Level(s) in which the proposed change(s) occurs: Level 2

7.2.1 Are the total program hours consistent with the requirements as listed below?

x☐ Yes
☐ No (If no, please explain)

Local Certificate - 300 hours	**Ontario College Certificate** - 600 hours
Diploma - 1200 to 1400 hours	**Advanced Diploma** - 1800 to 2000 hours
Graduate Certificate - 600 hours	

7.3 Will the program meet the General Education requirements (Policy 2-B-02) as listed below?

☐ No
x☐ Yes

Local Certificate, Ontario College Certificate and Graduate Certificate - none required)	**Diploma** - 3 required (minimum of 1 must be an elective)	**Advanced Diploma** - 4 required (minimum of 2 must be electives)

7.4 Will the program have 25% distinct curriculum to meet the Residency Requirement of 25% credit units? Consider all pathway agreements (e.g., bridging, internal articulations, laddering, advanced standing) with other Fanshawe programs and/or other institutions.

☐ No
x☐ Yes

Note: In accordance with POLICY NUMBER: 2-B-17 Graduation from Approved College Programs

...to be eligible for any College Credential a student must be enrolled and complete at least 25% of that program's credit units at Fanshawe College, unless stipulated differently by other approving bodies such as the Postsecondary Education Quality Assessment Board (PEQAB).

APPENDIX A: PROPOSED DEGREE AUDIT CHANGES

Course Code	Existing DA Courses	Total Hours	Total Credits	Describe proposed changes	Course Code	Proposed DA Courses	Total Hours	Total Credits
Level 1								
	No Changes							
Level 2								
MACH-1041	Power Transmission Theory	112	8	N/C	MACH-1041	Power Transmission Theory	112	8
MACH-1042	Applied Power Transmission	88	3	N/C	MACH-1042	Applied Power Transmission	88	3
MECH-1014	Fluid Mechanics Theory	128	9	N/C	MECH-1014	Fluid Mechanics Theory	128	9
MACH-1056	Applied Fluid Mechanics	88	3	N/C	MACH-1056	Applied Fluid Mechanics	88	3
COMP-1336	Computer Literacy	30	2	N/C	COMP-1336	Computer Literacy	30	2
GE-ELEC	Elective Gen-Ed	45	3	Mandatory Gen-Ed		Introduction to Small Business Consepts	45	3
		491	28			**TOTAL**	491	28
Level 3								
	No Changes							
	TOTAL	0	0			**TOTAL**	0	0
Level 4								
	TOTAL	0	0			**TOTAL**	0	0
Level 5								
	TOTAL	0	0			**TOTAL**	0	0
Level 6								
	TOTAL	0	0			**TOTAL**	0	0
	PROGRAM TOTAL	#REF!	#REF!			**PROGRAM TOTAL**	#REF!	#REF!

PROGRAM MAPPING (Mechanical Engineering Technician – Industrial Maintenance)

PROGRAM VOCATIONAL LEARNING OUTCOMES 1 - Introductory 2 - Intermediate 3 - Advanced The graduate has reliably demonstrated the ability to: (Source: MTCU Code: 51007)	LEVEL ONE						LEVEL TWO						
	ELNC-1006 Programmable Logic Controllers	ELEC-1037 Industrial Electricity	MECH-1001 Basic Mechanics Theory	MECH-1002 Applied Basic Mechanics	MATH-1044 Mathematics for Industrial Maintenance	INDV-XXXX General Education Elective	MACH-1041 Power Transmission Theory	MACH-1042 Applied Power Transmission	MECH-1014 Fluid Mechanics Theory	MACH-1056 Applied Fluid Mechanics	COMP-1336 Computer Literacy	INDV-XXXX General Education Elective	# OF COURSES EVALUATING THE OUTCOME
1. Complete all work in compliance with current legislation, standards, regulations and guidelines.	2	1											2
2. Apply quality control and quality assurance procedures to meet organizational standards and requirements.	2	2											2
3. Comply with current health and safety legislation, as well as organizational practices and procedures.	2	2		2				1	1	2			6
4. Apply sustainability best practices in workplaces.	1	1											2
5. Use current and emerging technologies to support the implementation of mechanical engineering projects.			2	2			1	2	2	2	2		7
6. Analyze and solve mechanical problems by applying mathematics and fundamentals of mechanical engineering.			2	2			2	2	2	2	2		7
7. Interpret, prepare and modify mechanical engineering drawings and other related technical documents.			3	3	2		2	3	3	3			7
8. Contribute to the design and the analysis of mechanical components, processes and systems applying fundamentals of mechanical engineering.					2						2		2
9. Manufacture, assemble, maintain and repair mechanical components according to required specifications.			2	1			2	2	1	2			6
10. Verify the specifications of materials, processes and operations to support the design and production of mechanical components.			1	1			1	1	1	1			6
11. Contribute to the planning, implementation and evaluation of projects.	1		1	1			1	1	1	1	3		8
12. Develop strategies for ongoing personal and professional development to enhance work performance.	1										2		2
TOTAL # OF OUTCOMES EVALUATED BY EACH COURSE	6	4	6	7	2	0	6	7	7	7	5	0	
V = Vocational Courses E = Essential Employability Skills Courses **GM = General Education (mandatory) G = General Education (elective)**													

NB - Only indicate the outcomes that are Taught & Evaluated (TE or TRE) in a course

PROGRAM COORDINATOR: Bruno Castellani

ACADEMIC CHAIR: , Donna Gates

Date Completed: April 3, 2012

Analysis of Mapping Results:

PROGRAM MAPPING Mechanical Engineering Technician – Industrial Maintenance)

PROGRAM VOCATIONAL LEARNING OUTCOMES 1 - Introductory 2 - Intermediate 3 - Advanced **The graduate has reliably demonstrated the ability to: (Source: MTCU Code: 51007)**	LEVEL THREE						Gen Ed - Electives		# OF COURSES EVALUATING THE OUTCOME	TOTAL FOR PROGRAM
	CADD-1039 Computer Aided Design for MIM	MACH-1043 Machine Tool Theory	MACH-1044 Applied Machining	WELD-1016 Welding Theory	WELD-1017 Applied Welding	INDV-XXXX General Education Elective	PSYC-5011 Industrial Relations	HIST-1026 The History of Manufacturing		
1. Complete all work in compliance with current legislation, standards, regulations and guidelines.	1	1	1						3	5
2. Apply quality control and quality assurance procedures to meet organizational standards and requirements.		1	1						2	4
3. Comply with current health and safety legislation, as well as organizational practices and procedures.			2	1	1				3	9
4. Apply sustainability best practices in workplaces.									0	2
5. Use current and emerging technologies to support the implementation of mechanical engineering projects.	3			1	2				3	10
6. Analyze and solve mechanical problems by applying mathematics and fundamentals of mechanical engineering.	3	1	1	1	2				5	12
7. Interpret, prepare and modify mechanical engineering drawings and other related technical documents.	3	1	1	2	3				5	12
8. Contribute to the design and the analysis of mechanical components, processes and systems applying fundamentals of mechanical engineering.									0	2
9. Manufacture, assemble, maintain and repair mechanical components according to required specifications.				1	1				2	8
10. Verify the specifications of materials, processes and operations to support the design and production of mechanical components.	1		1	1	1				4	10
11. Contribute to the planning, implementation and evaluation of projects.				1	1				2	10
12. Develop strategies for ongoing personal and professional development to enhance work performance.	2								1	3
TOTAL # OF OUTCOMES EVALUATED BY EACH COURSE	6	4	6	7	7	0	0	0		
V = Vocational Courses E = Essential Employability Skills Courses										
GM = General Education (mandatory) G = General Education (elective)										

NB - Only indicate the outcomes that are Taught & Evaluated (TE or TRE) in a course

PROGRAM COORDINATOR: Bruno Castellani

ACADEMIC CHAIR: , Donna Gates

Date Completed: April 3, 2012

Analysis of Mapping Results:

PROGRAM MAPPING (Mechanical Engineering Technician – Industrial Maintenance)														
	LEVEL ONE							LEVEL TWO						
PROGRAM ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES 4 = R 5 = RE 6 = TE 7 = TRE T = Taught R = Reinforced E = Evaluated **The graduate has reliably demonstrated the ability to:**	ELNC-1006 Programmable Logic Controllers	ELEC-1037 Industrial Electricity	MECH-1001 Basic Mechanics Theory	MECH-1002 Applied Basic Mechanics	MATH-1044 Mathematics for Industrial Maintenance	INDV-XXXX General Education Elective		MACH-1041 Power Transmission Theory	MACH-1042 Applied Power Transmission	MECH-1014 Fluid Mechanics Theory	MACH-1056 Applied Fluid Mechanics	COMP-1336 Computer Literacy	INDV-XXXX General Education Elective	# OF COURSES SUPPORTING THE OUTCOME
1. communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.	7	7	6	6	4			6	6	7	7	7		10
2. respond to written, spoken, or visual messages in a manner that ensures effective communication.	7	7	7	TR				7	7	7	7	7		9
3. execute mathematical operations accurately.	7	7	7	6	7			7	7	6	7			9
4. apply a systematic approach to solve problems.	7	7	6	6	7			4	4	7	7	7		10
5. use a variety of thinking skills to anticipate and solve problems.	7	7	4	TR	6			4	4	4	5	4		10
6. locate, select, organize, and document information using appropriate technology and information systems.	7	7	T	6				6	7	6	6	7		9
7. analyze, evaluate, and apply relevant information from a variety of sources.	7	7	7	7				7	7	7	7			8
8. show respect for the diverse opinions, values, belief systems, and contributions of others.	4	4	4	4				4	4	4	4	4		9
9. interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.	4	4	5	5				TR	5	5	4	4		9
10. manage the use of time and other resources to complete projects.	4	4	TR	4	4			4	4	4	4	7		10
11. take responsibility for one's own actions, decisions, and consequences.	4	4	4	TR				4	4	4	4	7		9
TOTAL # OF OUTCOMES SUPPORTED BY EACH COURSE	11	11	11	11	5	0		11	11	11	11	9	0	

PROGRAM COORDINATOR: Bruno Castellani

ACADEMIC CHAIR: , Donna Gates

Date Completed: April 3, 2012

PROGRAM MAPPING (Mechanical Engineering Technician – Industrial Maintenance)											
	LEVEL THREE						Gen Ed - Electives			
PROGRAM ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES 4 = R 5 = RE 6 = TE 7 = TRE T = Taught R = Reinforced E = Evaluated **The graduate has reliably demonstrated the ability to:**	CADD-1039 Computer Aided Design for MIM	MACH-1043 Machine Tool Theory	MACH-1044 Applied Machining	WELD-1016 Welding Theory	WELD-1017 Applied Welding	INDV-XXXX General Education Elective	PSYC-5011 Industrial Relations	HIST-1026 The History of Manufacturing	# OF COURSES SUPPORTING THE OUTCOME	TOTAL FOR PROGRAM
1. communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.	4	7	7	6	7				5	15
2. respond to written, spoken, or visual messages in a manner that ensures effective communication.	7	6	6	7	7				5	14
3. execute mathematical operations accurately.	6	7	7	7	6				5	14
4. apply a systematic approach to solve problems.	6	7	7	4	7				5	15
5. use a variety of thinking skills to anticipate and solve problems.	4	7	7	4	4				5	15
6. locate, select, organize, and document information using appropriate technology and information systems.	7	6	6	6	6				5	14
7. analyze, evaluate, and apply relevant information from a variety of sources.	4	7	7	7	7				5	13
8. show respect for the diverse opinions, values, belief systems, and contributions of others.		4	4	4	4				4	13
9. interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.	4	4	4	TR	6				5	14
10. manage the use of time and other resources to complete projects.	4	TR	TR	4	4				5	15
11. take responsibility for one's own actions, decisions, and consequences.	4	TR	TR	4	4				5	14
TOTAL # OF OUTCOMES SUPPORTED BY EACH COURSE	10	11	11	11	11	0	0	0		

PROGRAM COORDINATOR: Bruno Castellani

ACADEMIC CHAIR: , Donna Gates

Date Completed: April 3, 2012

Degree Audit Report

Catalog: 2016/2017

Program: MIM2S
Name: Mechanical Engineering Technician-Industrial Maintenance

Department: STE - St Thomas/Elgin Campus
Academic Level: PS
CCD: 8 - 4AcadSem/1200-1400hrs
Credential: Ontario College Diploma

Grade Scheme: LG2
Major: MIM2S - Mech Eng Tech'n - Ind Maint
Div: STE - St Thomas/Elgin Campus
Co-Op Indicator: N/A

Academic Program Requirement

Total Credits: 69.50
GPA Requirement: 2.000
Minimum Grade: D
Residency Reqmt: 18.00
Residency Reqmt GPA: 2.000

Academic Requirement: MIM2S.16 Mechanical Engineering Tech'n - Industrial Maint.

Major: MIM1
Grade Scheme: LG2
Minimum GPA: 2.000
Minimum Grade:

Subrequirement: Level 1

Gen Ed - Take a 3 credit General Education elective course

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
ELNC-1006	Programmable Logic Controllers	64.00	4.00	
ELEC-1037	Industrial Electricity	64.00	4.00	
MECH-1001	Basic Mechanics Theory	96.00	7.00	
MECH-1002	Applied Basic Mechanics	64.00	2.00	
MATH-1044	Mathematics for Industrial Maintenance	64.00	4.00	

Subrequirement: Level 2

~~Gen Ed - Take a 3 credit General Education elective course~~

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
MACH-1041	Power Transmission Theory	112.00	8.00	
MACH-1042	Applied Power Transmission	88.00	3.00	
MECH-1014	Fluid Mechanics Theory	128.00	9.00	
MACH-1056	Applied Fluid Mechanics	88.00	3.00	
COMP-1336	Computer Literacy	30.00	2.00	
BUS1-1103	Introduction to Small Business Concepts	45.00	3.00	(Mandatory Gen Ed)

Subrequirement: Level 3

Gen Ed - Take a 3 credit General Education elective course

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
CADD-1039	Computer Aided Design for MIM	30.00	2.00	
MACH-1043	Machine Tool Theory	48.00	3.00	

Degree Audit Report

MACH-1044	Applied Machining	128.00	4.50
WELD-1016	Welding Theory	32.00	2.00
WELD-1017	Applied Welding	88.00	3.00

Subrequirement: Gen Ed - Electives
Take 9 General Education Credits -
Normally taken in Levels 1, 2 and 3

Subrequirement: Program Residency
Students Must Complete a Minimum of 18 credits in this program at Fanshawe College to meet the Program Residency requirement and graduate from this program

12/20/15

Approved By Chair/Manager:

SIFRC 11/4/15
Department and Date:

Approved by Dean:

10/26/15
Date:

General Education Approved By(as appropriate):

Date: